

## ABSTRACT

Apparatus for detecting slow and small changes of electrical signals including the sign of the changes, which has:

-a controlled switch (2) connected in the path of the signal to be detected;

-a capacitor (3) connected with a first terminal to the switch and charged to the voltage of the signal;

-an amplifier (5) with an input connected to second terminal of the capacitor (3) and generating a pulse signal corresponding to the charge or discharge current of the capacitor having corresponding proper sign;

-a window comparator (7) having first and second reference voltages (+UK, -UK) determining a window, and a signal input connected to output of the amplifier (5) for indicating whether the output signal of the amplifier lies in the range defined by the window or it has been crossed in negative or positive directions;

-storage and logical units each having first and second storage means (8, 11); and

-a pulse generator (9) connected to control input of the controlled switch (2) to make it closed for periodically repeated sampling periods, and also connected to the storage and logical units,

wherein the first storage means storing the logical state of the window comparator (7) taken during the pulse signal with proper sign, and a predetermined section of each pulse of the pulse generator reading such stored values of the first storage means into the second storage means.